

# Examination of Gas Hydrate Formation

with the

## Gas Hydrate Autoclave GHA 200



### Characteristics

- Pressure range up to 700 bar (10,152 psi)
- Visual observation during test
- Take photos and videos
- Simulates pipeline conditions
- Long term experiments
- Automated test procedure
- Easy opening mechanism

### See what is going on!

The Gas Hydrate Autoclave GHA 200 provided by PSL Systemtechnik is the renewed and actualised version of the standard apparatus for examining gas hydrate formation processes.

In a pressure range up to 200 bar (2,900 psi) or up to 700 bar (10,152 psi) the effectiveness and efficiency of thermodynamic and

kinetic gas hydrate inhibitors as well as anti-agglomerants can be analysed.

The GHA provides multiple features on a small footprint. Up to 6 hydrate cells can be operated simultaneously via PC software. With a boroscope camera gas hydrate formation can be visually observed. Photos and videos can be taken during test.



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### Long term experiments

With the PSL software *Hydrate* automated tests can be run. The optical control of tests and the measurement of temperature, pressure and torque provide versatile test schedules and possibilities to analyse different requirements.

Double seal sets prevent even smallest pressure losses through leakage and permit long term experiments up to 30 days and longer.

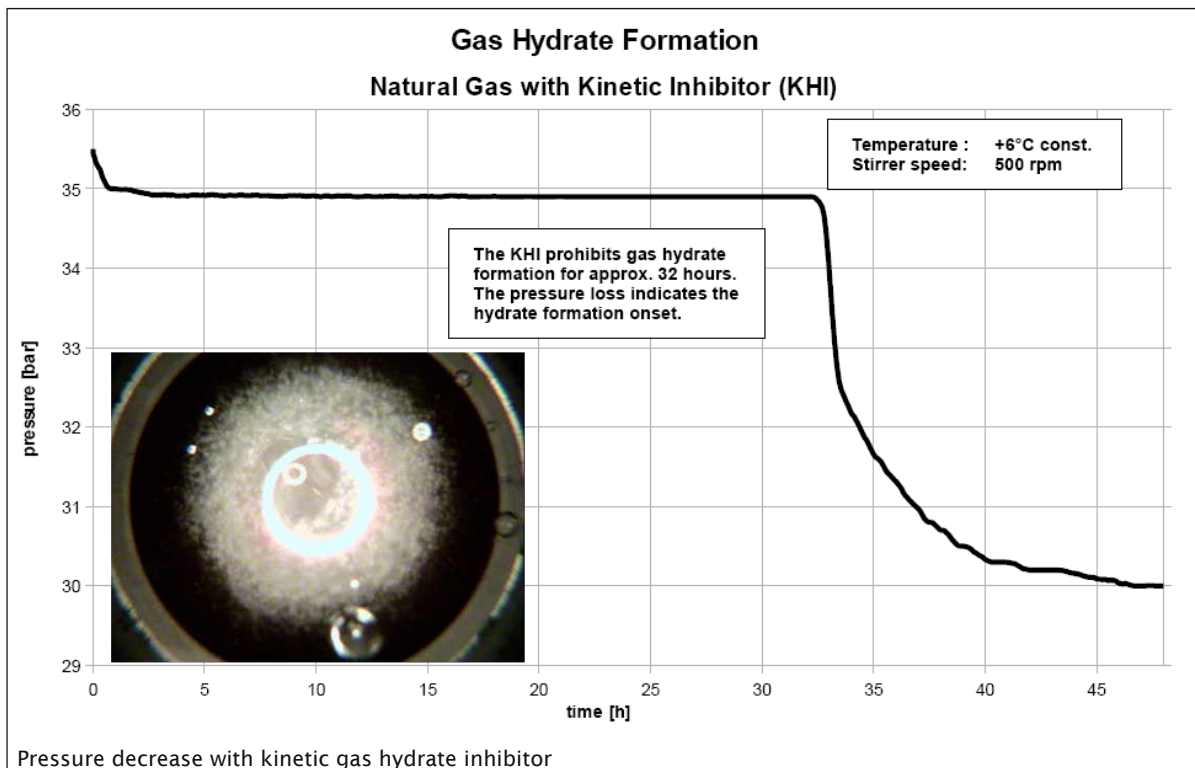
Due to an auto restart feature, the test results are save even in case of power failure.

### Highly ergonomic

Furthermore, the GHA 200 is highly ergonomic and requires small space on your laboratory desk.

The specially designed locking mechanism, to be opened by just one person, and the integrated quick connectors make operation easy and comfortable.

The Gas Hydrate Autoclave can be adapted to your requirements.



Measurement example for kinetic inhibitor

### Specifications:

Temperature range:	-10 °C ... +60 °C (+14 °F ... +140 °F)
Temperature accuracy:	0.1 °C
Reproducibility:	0.1 °C
Pressure range:	up to 200 bar (2,900 psi) / 700 bar (10,152 psi)
Pressure accuracy:	0.5 %
Cell volume:	450 ml total, 200 ml fluid (recommended)
Optics:	boroscope, halogene light source, fibre-optic
Camera resolution:	768 x 494 pixel, RGB / YC
Material:	stainless steel (AISI 316 Ti), Viton®
Voltage input:	230 V~, 50/60 Hz (115 V~ on request)
Power consumption:	2,200 W
Weight:	40 kg (without PC)
Dimensions (WxDxH):	50 cm x 60 cm x 60 cm (without PC)